

REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars.

1. In the specification

The specification is amended, as shown in the foregoing amendment to the specification, to eliminate reference to the claims and to correct informalities pointed out in the rejection. No new matter is added, as the changes simply correct minor informalities.

Entry of the amendment to the specification is respectfully requested in the next Office communication.

2. In the claims

As shown in the foregoing amendment to the claims, the claims have been amended to more clearly point out the subject matter for which protection is sought and to address the claim objections and issues under 35 U.S.C. § 112 second paragraph in the rejection. While applicant feels that the claims as presented are definite, in the interests of furthering prosecution, changes have been made in accordance with suggestions made in the rejection. No new matter is added, as support for the changes are clearly found at least in Fig. 1 and on page 5, line 28 through page 6, line 11 of the accompanying description in the specification.

A. Claims 1-7 and 11

Claim 1 is amended to clarify that each transmission channel is “bidirectional” and to clarify that signals inherently have signal patterns.

Claims 2, 3, 5 and 11 are amended to clarify that each transmission channel is “bidirectional.”

Claim 4 is left unchanged.

Claim 7 is amended to clarify that each transmission channel is “bidirectional” and to clarify antecedent basis for “supply voltage.”

B. Claims 8-10

Claim 8 is amended to clarify that each transmission channel is “bidirectional.”

Claims 9 and 10 are left unchanged.

C. Claims 12 and 13

Claims 12 and 13 are amended to clarify that each transmission channel is “bidirectional.”

D. Claim 14

Claim 14 is amended to clarify that each transmission channel is “bidirectional.”

Entry of the amendment of the claims is respectfully requested in the next Office communication.

E. Rejection of claims 1-14 under 35 U.S.C. § 112 second paragraph

The amendments made to claims 1-3, 5-8 and 11-14, discussed above, provide the clarity and antecedent basis requested in the rejection. Accordingly, withdrawal of this rejection is respectfully requested.

3. Rejection of claims 1-7 and 11-14 under 35 U.S.C. § 102(e) as being anticipated by U.S. patent 5,878,142 (Caputo et al.)

This rejection is respectfully traversed on the basis that the Caputo et al. patent fails to disclose each and every limitation of claims 1-7 and 11-14.

A. Claim 1

The Caputo et al. patent does not disclose a first bidirectional transmission channel and a second bidirectional transmission channel, the first and second bidirectional transmission channels being logically separated, and where the second bidirectional transmission channel is activable during the total time period between activation and deactivation of the data carrier, as is required by pending claim 1.

The Caputo et al. patent discloses only a *single* bidirectional transmission channel, the telephone line as represented by the connections between the transmitter **56** and the receiver **58** and further the connections between the transmitter **68** and the receiver **66**. Because the Caputo et al. patent discloses only a *single* bidirectional transmission channel, the authentication and data transfer cannot occur simultaneously (col. 9, lines 8-11, once authentication has been completed, then data transfer can begin). Therefore, the Caputo et al. patent does not disclose a second bidirectional transmission channel that is activable during the total time period between activation and deactivation of the data carrier, as is required by pending claim 1.

The two connections **12**, **14** in Fig. 4A of the Caputo et al. patent do not provide bidirectional transmission channels, but are merely used to allow the token **10** to be connected to a computer port of a PC or terminal and a modular receptacle or cable (col. 4, lines 55-59). These connections form part of the single bidirectional transmission channel already discussed. They do not alter the fact that data transfer cannot occur until authentication has been completed.

The embodiment recited in pending claim 1, requires that authentication and data transfer occur at the same time using two bidirectional transmission channels. The use of two bidirectional transmission channels is important since it allows very reliable authenticity testing without using, or being dependent upon, the standard transmission channel between a data carrier and an external device.

Because the Caputo et al. patent does not disclose authentication and transfer of data occurs simultaneously over two bidirectional transmission channels, claim 1 is not anticipated. Accordingly, Withdrawal of this rejection is respectfully requested.

B. Claim 2

The Caputo et al. patent does not disclose providing the second bidirectional transmission channel by modulating the signal of the first bidirectional transmission channel, as required by claim 2.

As discussed above in section A, the Caputo et al. patent discloses a *single* bidirectional transmission channel. A modem **40** is provided by the Caputo et al. patent, merely to modulate the data from the token **10** so that the data can travel over the phone line. The modem does not create a second bidirectional transmission channel within the first bidirectional transmission channel by modulating the signal of the first bidirectional transmission channel, as is required by pending claim 2.

The embodiment recited in pending claim 2, requires that a second bidirectional transmission channel be created within the first bidirectional transmission channel by modulating the signal of the first bidirectional transmission channel. Because the Caputo et al. patent does not disclose creating a second bidirectional transmission channel within the first bidirectional transmission channel by modulating the signal of the first bidirectional transmission channel, claim 2 is not anticipated.

Accordingly, withdrawal of this rejection is respectfully requested.

C. Claim 3

The Caputo et al. patent does not disclose that modulating the signal of the first bidirectional transmission channel to provide the second bidirectional transmission channel does not impair the ISO compatibility of the data exchanged via the first bidirectional transmission channel, as required by claim 3.

As discussed above in second B, the Caputo et al. patent does not disclose modulating the signal of a first bidirectional transmission channel to create a second bidirectional transmission channel. It goes without saying, therefore, that the Caputo et al. patent cannot disclose that the modulation does not impair the ISO compatibility of the data exchanged via the first bidirectional transmission channel, as required by claim 3, because no modulation to create the second bidirectional transmission channel occurs.

Since the Caputo et al. patent does not disclose that modulating the signal of the first bidirectional transmission channel to provide the second bidirectional transmission channel does not impair the ISO compatibility of the data exchanged via

the first bidirectional transmission channel, claim 3 cannot be anticipated. Accordingly, withdrawal of this rejection is respectfully requested.

D. Claim 12

The Caputo et al. patent does not disclose a first bidirectional transmission channel and a second bidirectional transmission channel, the first and second bidirectional transmission channels being physically or logically separated, and where the second bidirectional transmission channel is ready for generating signals during the total time period between activation and deactivation of the data carrier, as is required by pending claim 12.

For the reasons discussed above in section A, the Caputo et al. reference does not disclose a first bidirectional transmission channel and a second bidirectional transmission channel, the first and second bidirectional transmission channels being physically or logically separated, and where the second bidirectional transmission channel is ready for generating signals during the total time period between activation and deactivation of the data carrier, as is required by pending claim 12. Accordingly, withdrawal of this rejection is respectfully requested.

E. Claim 14

The Caputo et al. patent does not disclose a first bidirectional transmission channel and a second bidirectional transmission channel, the first and second bidirectional transmission channels being physically or logically separated, and where the second bidirectional transmission channel is activable during the total time period between activation and deactivation of the data carrier, as is required by pending claim 14.

For the reasons discussed above in section A, the Caputo et al. patent does not disclose a first bidirectional transmission channel and a second bidirectional transmission channel, the first and second bidirectional transmission channels being physically or logically separated, and where the second bidirectional transmission channel is activable during the total time period between activation and deactivation

of the data carrier, as is required by pending claim 14. Accordingly, withdrawal of this rejection is respectfully requested.

4. Rejection of claim 8 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 5,878,142 (Caputo et al.) in view of U.S. patent 5,852,653 (Reel et al.)

This rejection is respectfully traversed on the basis that it fails to establish a *prima facie* case of obviousness.

A. Neither the Caputo et al. patent, nor the Reel et al. patent disclose every limitation of claim 8

This rejection is respectfully traversed on the basis that the rejection fails to establish a *prima facie* case of obviousness because neither the Caputo et al. patent, nor the Reel et al. patent, disclose every limitation of pending claim 8.

As discussed previously, the Caputo et al. patent does not disclose a first bidirectional transmission channel and a second bidirectional transmission channel, the first and second bidirectional transmission channels being physically separated, and where the second bidirectional transmission channel is activable during the total time period between activation and deactivation of the data carrier, as is required by pending claim 8.

The Reel et al. patent does not disclose a second bidirectional transmission channel that is activable during the total time period between activation and deactivation of the data carrier, as is required by pending claim 8. The Reel et al. patent discloses a security device **10** that requires a user to perform authentication using one port **18**, disconnect from that port and then connect to another port **22**. While the Reel et al. patent may disclose multiple communication lines, the authentication and data transfer cannot occur simultaneously because the user must first authenticate, disconnect and then reconnect in order to transfer data (col. 3, lines 1-18).

Since none of the cited references disclose every limitation of claim 8, a *prima facie* case of obviousness cannot stand. Accordingly, withdrawal of this rejection is respectfully requested.

B. There is no suggestion or motivation to combine the cited references

This rejection is respectfully traversed on the basis that the rejection fails to establish a *prima facie* case of obviousness because there is no suggestion or motivation to combine the cited references.

One of ordinary skill in the art of pocket sized security devices would not be motivated to combine the device of the Caputo et al. patent and the device of the Reel et al. patent. The Caputo et al. patent describes a pocket sized encrypting and authenticating communications device, which has limited space for hardware due to its small size. The Reel et al. patent discloses communications line security device that is contained within a relatively large housing 120. Because the device described in the Reel et al. patent is much larger than pocket sized, it can contain many communication lines. However, because the device of the Caputo et al. patent is much smaller, it can contain only a limited amount of hardware, including communication lines.

Since the sizes of the devices described by the Caputo et al. and the Reel et al. patents are so different, there would be no suggestion for one of ordinary skill in the art of pocket sized security devices to provide multiple communication lines as disclosed by the Reel et al. patent. This is true simply because of the limited space in a pocket sized security device.

Because there is no suggestion or motivation to combine the cited references, a *prima facie* case of obviousness cannot stand. Accordingly, withdrawal of this rejection is respectfully requested.

C. There is no reasonable expectation of success

This rejection is respectfully traversed on the basis that the rejection fails to establish a *prima facie* case of obviousness because there is no reasonable expectation of success for combining the cited references.

As discussed above in section B, the device of the Caputo et al. patent is a pocket sized security device, while the security device of the Reel et al. patent is much larger and contained in a housing. There is no reason to think that one of

ordinary skill in the art of pocket sized security devices could successfully add the multiple communication lines disclosed by the Reel et al. patent to the pocket sized security device described by the Caputo et al. patent. Because of the difference in size of the devices, one can not simply add the communications lines of the Reel et al. patent to the pocket sized security device of the Caputo et al. patent.

Since one of ordinary skill in the art of pocket sized security devices could not successfully combine the communications lines of the Reel et al. patent with the pocket sized security device of the Caputo et al. patent, a *prima facie* case of obviousness cannot be sustained. Therefore, withdrawal of this rejection is respectfully requested.

5. Rejection of claims 9 and 10 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 5,878,142 (Caputo et al.) in view of U.S. patent 5,852,653 (Reel et al.) and further in view of U.S. patent 4,873,556 (Matsushita et al.)

This rejection is respectfully traversed on the basis that it fails to establish a *prima facie* case of obviousness for the reasons discussed above in section 4, and because the Matsushita et al. patent does not make up for the shortcomings of the Reel et al. patent.

The Matsushita et al. patent is relied upon to show that it is well known to transmit data as electromagnetic, electrostatic, magnetic, acoustic or optical signals. The Matsushita et al. patent does not disclose a first bidirectional transmission channel and a second bidirectional transmission channel, the first and second bidirectional transmission channels being physically separated, and where the second bidirectional transmission channel is activable during the total time period between activation and deactivation of the data carrier, as is required by pending claim 8 and from which claims 9 and 10 depend.

Accordingly, because the Matsushita et al. patent does not make up for the shortcomings of the Reel et al. patent, a *prima facie* case of obviousness cannot be sustained and withdrawal of this rejection is respectfully requested.

6. Conclusion

As a result of the amendment to the claims, and further in view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is respectfully requested that every pending claim in the present application be allowed and the application be passed to issue.

If any issues remain that may be resolved by a telephone or facsimile communication with the applicants' attorney, the examiner is invited to contact the undersigned at the numbers shown below.

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Respectfully submitted,



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